

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-24 (cancelled).

Claim 25 (original): A method of inducing hypoxia in a non-hypoxic region of a tumor, comprising the steps of:

- a) administering a magnetic fluid in a subject in need thereof through a blood vessel feeding a tumor; and
- b) applying a magnetic field adjacent the tumor to join a plurality of particles in the magnetic fluid to form a blockage in the blood vessel thereby impeding the flow of blood to the tumor.

Claims 26-46 (cancelled).

Claim 47 (original): A method of treating a tumor, comprising the steps of:

- a) administering a magnetic fluid in a subject in need thereof through a blood vessel feeding a tumor;
- b) applying a magnetic field adjacent the tumor to join a plurality of particles in the magnetic fluid to form a blockage in the blood vessel thereby impeding the flow of blood to the tumor; and
- c) continuing with step b) for a sufficient time to induce hypoxia in a non-hypoxic region of the tumor.

Claim 48 (original): The method of Claim 47, further comprising the step of:

- d) administering a hypoxic drug prior to or after step a), or substantially simultaneously therewith.

Claim 49 (original): The method of Claim 48, wherein:

the hypoxic drug is selected from the group consisting of
AQ4N, mitomycin C, porfiromycin, and tirapazamine.

Claims 50-91 (cancelled).

Claim 92 (new): The method of Claim 25, wherein:

the magnetic fluid in step a) is delivered through a catheter or
by injection.

Claim 93 (new): The method of Claim 25, wherein:

the magnetic field in step b) is applied by an internal
micromagnet, an external rare earth magnet, or an external
electromagnet.

Claim 94 (new): The method of Claim 25, wherein:

the magnetic fluid comprises core particles of a magnetic
material.

Claim 95 (new): The method of Claim 94, wherein:

the core particles comprise coated particles.

Claim 96 (new): The method of Claim 94, wherein:

the core particles have an average diameter of about 1 nm to
20 μm .

Claim 97 (new): The method of Claim 96, wherein:

the core particles have an average diameter of about 10 nm to 5 μ m.

Claim 98 (new): The method of Claim 97, wherein:

the core particles have an average diameter of about 10 nm to 1,000 nm.

Claim 99 (new): The method of Claim 94, wherein:

the magnetic material is selected from the group consisting of iron, iron oxide, cobalt, cobalt oxide, nickel, nickel oxide, an alloy, and a combination thereof.

Claim 100 (new): The method of Claim 94, wherein:

the core particles comprise a coating of a surfactant.

Claim 101 (new): The method of Claim 100, wherein:

the surfactant is selected from the group consisting of polyethylene oxide, dextran, polyoxypropylene-polyoxyethylene block copolymer, and a combination thereof.

Claim 102 (new): The method of Claim 94, wherein:

the core particles comprise a coating selected from the group consisting of a ceramic material, a metallic material, a polymer material, and a combination thereof.

Claim 103 (new): The method of Claim 102, wherein:

the coating is selected from the group consisting of silica, gold, silver, platinum, steel, cobalt, carbon, polyethylene glycol, dextran, polyoxyethylene sorbitol ester, sorbitol, mannitol, and a combination thereof.

Claim 104 (new): The method of Claim 94, wherein:

the core particles comprise first and second successive coatings.

Claim 105 (new): The method of Claim 104, wherein:

the first coating comprises a coating of a surfactant; and
the second coating comprises a coating of a material selected from the group consisting of a ceramic material, a metallic material, a polymer material, and a combination thereof.

Claim 106 (new): The method of Claim 105, wherein:

the surfactant is selected from the group consisting of polyethylene oxide, dextran, polyoxypropylene-polyoxyethylene block copolymer, and a combination thereof.

Claim 107 (new): The method of Claim 106, wherein:

the second coating is selected from the group consisting of silica, gold, silver, platinum, steel, cobalt, carbon, polyethylene glycol, dextran, polyoxyethylene sorbitol ester, sorbitol, mannitol, and a combination thereof.

Claim 108 (new): The method of Claim 96, wherein:

the core particles are dispersed in a carrier fluid.

Claim 109 (new): The method of Claim 108, wherein:

the carrier fluid comprises a water-based carrier fluid.

Claim 110 (new): The method of Claim 108, wherein:

the carrier fluid is selected from the group consisting of water, Ringer's solution, normal saline, sugar solution, blood plasma, and a combination thereof.

Claim 111 (new): The method of Claim 108, wherein:

the fraction of the core particles is about 1-90%.

Claim 112 (new): The method of Claim 96, wherein:

the core particles comprise a general shape selected from the group consisting of spherical, needle-like, cubic, irregular, cylindrical, diamond, oval, and a combination thereof.

Claim 113 (new): The method of Claim 47, wherein:

the magnetic fluid is delivered through a catheter or by injection.

Claim 114 (new): The method of Claim 47, wherein:

the magnetic field is applied by an internal micromagnet, an external rare earth magnet, or an external electromagnet.

Claim 115 (new): The method of Claim 48, wherein:

the hypoxic drug is administered through a catheter, by injection, or intravenously.

Claim 116 (new): The method of Claim 47, wherein:

the magnetic fluid comprises core particles of a magnetic material.

Claim 117 (new): The method of Claim 116, wherein:

the core particles comprise coated particles.

Claim 118 (new): The method of Claim 116, wherein:

the core particles have an average diameter of about 1 nm to 20 μm .

Claim 119 (new): The method of Claim 118, wherein:

the core particles have an average diameter of about 10 nm to 5 μm .

Claim 120 (new): The method of Claim 119, wherein:

the core particles have an average diameter of about 10 nm to 1,000 nm.

Claim 121 (new): The method of Claim 116, wherein:

the magnetic material is selected from the group consisting of iron, iron oxide, cobalt, cobalt oxide, nickel, nickel oxide, an alloy, and a combination thereof.

Claim 122 (new): The method of Claim 116, wherein:

the core particles comprise a coating of a surfactant.

Claim 123 (new): The method of Claim 122, wherein:

the surfactant is selected from the group consisting of polyethylene oxide, dextran, polyoxyethylene sorbitol ester, and a combination thereof.

Claim 124 (new): The method of Claim 116, wherein:

the core particles comprise a coating selected from the group consisting of a ceramic material, a metallic material, a polymer material, and a combination thereof.

Claim 125 (new): The method of Claim 124, wherein:

the coating is selected from the group consisting of silica, gold, silver, platinum, steel, cobalt, carbon, polyethylene glycol, dextran, polyoxyethylene sorbitol ester, sorbitol, mannitol, and a combination thereof.

Claim 126 (new): The method of Claim 116, wherein:

the core particles comprise first and second successive coatings.

Claim 127 (new): The method of Claim 126, wherein:

the first coating comprises a coating of a surfactant; and
the second coating comprises a coating of a material selected from the group consisting of a ceramic material, a metallic material, a polymer material, and a combination thereof.

Claim 128 (new): The method of Claim 127, wherein:

the surfactant is selected from the group consisting of polyethylene oxide, dextran, polyoxypropylene-polyoxyethylene block copolymer, and a combination thereof.

Claim 129 (new): The method of Claim 128, wherein:

the second coating is selected from the group consisting of silica, gold, silver, platinum, steel, cobalt, carbon, polyethylene glycol, dextran, polyoxyethylene sorbitol ester, sorbitol, mannitol, and a combination thereof.

Claim 130 (new): The method of Claim 118, wherein:

the core particles are dispersed in a carrier fluid.

Claim 131 (new): The method of Claim 130, wherein:

the carrier fluid comprises a water-based carrier fluid.

Claim 132 (new): The method of Claim 130, wherein:

the carrier fluid is selected from the group consisting of water, Ringer's solution, normal saline, sugar solution, blood plasma, and a combination thereof.

Claim 133 (new): The method of Claim 130, wherein:

the fraction of the core particles is about 1-90%.

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Claim 134 (new): The method of Claim 118, wherein:

the core particles comprise a general shape selected from the group consisting of spherical, needle-like, cubic, irregular, cylindrical, diamond, oval, and a combination thereof.